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Amateur Radio

JOURNAL OF
THE WIRELESS
INSTITUTE OF
AUSTRALIA

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VK6WI: Sundays, 0930 hours EAST, on 7195 Kc. No frequency checks available.

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EDITORIAL

Doubtless all are now aware of the further increase of Sales Tax on electronic component parts that, for the purposes of taxation, could be used in the construction or maintenance of radio receivers, and/or paging or public address systems and amplifiers to which is connected a gramophone motor and pickup and/or radio tuner.

The fact that such components are taxed under "luxury items" is brought about by the classification of radio receivers and amplifiers, etc., as musical instruments. This in itself is sufficiently absurd to have merited greater foresight by the Taxation Authority. The imposition of the same high rate of tax on the parts and accessories which, unlike accessories of a piano or guitar or other forms of musical instruments, find a wide and important use in the vast field of electronics, as applied particularly to Amateur Radio—greatly concerns us.

In opposition to the original increment in taxation as affecting communications receivers and the parts and accessories thereof used by Amateurs in the pursuits of their investigations and research into the mysteries of radio wave propagation and reception—an activity that the Government and the people of Australia know only too well as having been the means of saving lives, homes, and property during many times of emergency—the Wireless Institute of Australia on behalf of its 3,000 odd members made representation to the Commissioner of Taxation—as did every other section of the radio and electronic industry—for the consideration of a tax concession by the Federal Treasurer when preparing his Budget for 1951-52.

So far as the Institute was concerned every indication was given that consideration of its request would be undertaken by the Federal Treasurer, the Institute having pointed out the great National advantage of having a ready pool of semi-trained technical

personnel together with emergency operating networks which could be immediately available to the Government or the Armed Services in times of emergency—National or otherwise.

To say the least of it our representation brought a most disappointing and disheartening result; not only did Sales Tax again increase, but it increased to the extent of showing a marked disregard of the National worth of the Amateur of Australia by the Authorities.

Radio receivers are now classified under the fourth schedule together with toys, games, puzzles and fireworks! A perusal of this schedule indicates that, with the exception of radio receivers, very few parts and accessories of the items in the schedule could be used in anything other than the article for which they were intended. But in the case of radio receivers almost every component used in its manufacture is also used somewhere in electronic equipment which is still taxable at the lowest tax rate. What inconsistency!

But the answer is an easy one, without any variation of the express provisions of the Law being involved. In the same way that personnel engaged in the manufacture or maintenance of electronic equipment—as distinct from receiving equipment—can purchase these same component parts at the lower tax rate on the production of some form of authority, so should Amateurs be able to do so on production of their license granted them by the Postmaster-General's Department or any other kind of form suitable to the Taxation Department which the Institute would be pleased to print at its own expense.

Let's hope that 1952 will bring forth some sane reasoning by the Authorities so that the Amateurs of Australia can play their part in time of emergency as they have been able to do in the past.

—FEDERAL EXECUTIVE

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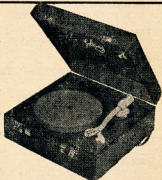
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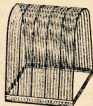
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Built-in Clamp Tube Modulation for the Command Transmitter

BY P. PAGE,* VK2APP, AND O. L. BROWN,† VK3ARL

The portable capabilities of a Command Transmitter are at first consideration very great, and for c.w. operation this is so; the only external equipment necessary being the power supply. But for satisfactory portable or mobile phone operation compactness becomes somewhat more difficult if an external modulator is to be used. There is also the current drain to be considered in mobile operation.

After experimentation with various types of modulation using transformers, it was found that to build one onto the chassis of the Command and still retain the r.f. stability was almost an impossibility. The only other alternative, therefore, was an external modulator or something using no more than two tubes and no coupling transformers. The only system that appeared readily to fit the bill was the Clamp Tube System of Screen Grid Modulation.

The two tubes used were a 6L6 modulator tube and some triode pentode, in this case a 6P7 as a speech amplifier driver.

The first necessity was to remove all components under the chassis used in connection with the crystal calibration check originally incorporated in the Transmitter. This necessitated the removal of all resistors under the centre and right hand sockets at the back of the transmitter, and the filament trap wiring for the magic eye. The series parallel filament resistor across the 1626 master oscillator tube was also removed, and this tube given straight 12 volt filament wiring. The filaments of the centre and right hand sockets were connected in parallel, and owing to the fact that 6 volt tubes were used in the modulation section, a 6 volt filament source was supplied in addition to the 12 volt source for the three r.f. tubes in the transmitter.

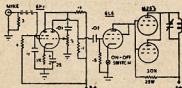
Both relays and their appropriate wiring were removed. The parallel cathodes of the 1625 output tubes were taken direct to ground. The high tension to the plate of the master oscillator tube—which originally went through a pair of contacts on the relay under the chassis—was taken direct from its pin on the input socket to a suitable tipoint, bypassing the relay, and the unnecessary wiring removed.

Some of the pins on the two sockets used for modulation were originally used as tiepoints for other circuits. These, where necessary, are removed and connected direct, either to the appropriate pin on the input socket or to some other common tiepoint.

The centre, or crystal socket, is now used to mount the 6L6, which is triode connected, the plate and screen being tied together and taken directly to one of the screen pins of the parallel 1625s in the p.a. The grid bias resistor of the 6L6 is 500,000 ohms: from grid to

earth and the cathode is taken through an s.p.s.t. switch, directly to earth. The grid of the 6L6 is also taken through a 0.01 uF. tubular condenser to the triode plate of the 6P7. The grid of this section has a half megohm potentiometer from grid to ground. The moving arm of the pot is taken through a 0.01 uF. tubular condenser to the pentode plate. Both triode and pentode plate loads are 1.0 meg. The pentode screen load is a 1.0 meg., the cathode of the 6P7 goes to ground through 1,000 ohms, bypassed with a 25 uF. electrolytic.

The grid of the pentode section is taken along the right hand side, under the chassis and round to the bottom left hand corner of the front panel in shielded cable, where it is attached to the microphone jack, which has a 3.0 meg grid bias resistor across it. The microphone jack is of the unshielded closed circuit type, though any suitable jack shielded or otherwise could be used; in this case an old i.f. can, cut in half, was used to shield the jack.



The normal screen voltage supply to the 1625s is entirely removed, and screen current is obtained through a 30,000 ohm 25 w. dropping resistor from the common B+ supply. This resistor is mounted under the chassis at the left hand ends of the p.a. tuning condensers. A small right angle metal shield was made to enclose the under chassis modulator components at the rear of the transmitter so that, when the bottom chassis cover is in position, the modulator circuitry is almost entirely shielded from the rest of the transmitter.

The aerial tuning coil was removed from behind the front panel and a false panel was fitted over the rectangular window to support a small plate meter for tuning purposes. The ends of the variable link in the Command tank coil were brought out to two insulated terminals on the front left hand side for antenna connection.

To obtain independent p.a. tuning, apart from the ganged p.a. and oscillator tuning arrangements, the pre-set p.a. condenser under the chassis was unlocked by removing the screw from the locking lug, and a small extension shaft was brought through the side of the chassis.

The set-up as used for a.c. operation has two 100 Ma. power supplies on an external chassis—one at 300 volts for the transmitter p.a. and modulating section, the other at 220 volts or less for the master oscillator and the Command Receiver.

The filament supply is obtained by connecting in series the two 6.3 volt windings available on the transformers to give 12.6 volts for the oscillator and p.a. tubes in the transmitter and the 12 volt tubes in the receiver. The 6.3 for the two modulator tubes is obtained from the junction of the two windings. This arrangement appears to cause no undue heating of the transformers when used with a 3 amp. winding from 0-6 volts and a 2 amp. winding from 0-12.

The potentiometer for modulation gain control is a combination s.p.s.t. switch and pot, as used in some b.c. receivers. The switch section was used in the cathode of the 6L6, thus necessitating only one external control to serve two purposes. The control is mounted in the right hand side of the chassis, at the rear, directly beneath the socket of the 6P7. When the switch is in the "off" position, the screen load is effectively removed from the p.a. tubes and the transmitter should be tuned up in this position. The switch should be in the "off" position for c.w. operation if required.

Disc Recording from Wire or Tape Recordings

Often an outside-station recording is required and it is found much more trouble to cut than the inside-station. If the material to be disc recorded is already recorded on wire or tape, there is an easy way out of this trouble.

Just play the wire or tape recording backwards at normal speed, feeding into the cutting head amplifier. The recording turntable is run backwards and cutting is done from inside to outside.

When the disc is put on a normal clockwise turntable it will play from outside to inside in a perfectly normal and satisfactory way.

However, many types of wire recorders won't play backwards at normal speed. To overcome this trouble, the wire can be re-wound as follows. Instead of threading up in the usual way, put the recorded wire spool on a dummy spindle and connect the start of the wire to an empty spool on the re-wind spindle. Run on reverse or re-wind until all wire is transferred to this spool, then thread up normally.

Running the recorder forwards will now be pulling the wire through backwards as far as the recorded material is concerned. Due to wire build-up effects, the speed of the wire at the ends will be slightly different than when recorded, but in practice will not be noticeable.—B. Hannaford, VK2AAL.

* "Stoneridge," Mont Eagle, N.S.W.

† Darlington Road, Stawell, Victoria.

TELEVISION MADE EASY

Part v.—Further Notes on the Receiver

BY KEN WALL AND JOHN JARMAN,* VK3ADA

So we have found that the vision section of a television receiver consists of r.f. amplifier and mixer (both common to sound and vision), a vision i.f. channel (consisting of about four stages, and using an i.f. around the 15 Mc. mark) and a vision detector. Now the detector is a diode type, similar to that used in common sound receivers, but for one important difference.

During the high frequencies (up to about 6 Mc.), representing picture detail, which the detector must separate from carrier, the load resistor cannot be by-passed by a simple capacitor, as we find in a sound receiver. Instead, the by-passing (of the surplus r.f.) is done by a complicated circuit, as is shown in Fig. 1, which is designed to by-pass the carrier frequencies only, allowing the video frequencies to pass through the load resistor.

Our detector must also be connected, so as to ensure that the picture on our screen will be positive, and not negative (like the negative of a photo) and, here in Australia, where negative modulation is to be used, we must ensure that the picture brightness will decrease when carrier amplitude increases.

Now look at Fig. 2, which shows two basic detector circuits, with the filter system omitted. If the detector be coupled directly to the cathode ray tube, the circuit "B" would be the "shot." This is called the "anode above ground" detector, whose output voltage becomes more negative (thereby reducing picture brilliance) when carrier amplitude increases.

But suppose a video amplifier stage be inserted between detector and c.r.t. This amplifier will reverse the phase of the detector's output, so that the "cathode above ground" circuit, shown in Fig. 2A, must be used.

Now refer back to the block diagram, given in the last article. We see that if a video amplifier be used, it must be provided with a d.c. restorer.

Let's study the video amplifier first of all. Remember the detector's output varies in frequency from 25 c.p.s. (frame frequency) to about 6 Mc. All of these frequencies must be evenly amplified, so that our video amplifier must have a flat response over a wide band.

Well, it is basically a resistance-capacitance coupled amplifier but provided with means of extending the

normal bandwidth. One type is shown in Fig. 3, the small "peaking" coil "C" working in conjunction with the natural capacitance of the circuit to help maintain uniform amplification at the high and low ends of the video band.

Now for this d.c. restorer. We have learnt that the detector's output consists of a combination of a.c. and d.c., the former representing the picture detail, and the latter the average light and shade, e.g., the difference between dusk and bright sunlight.

The video amplifier, however, amplifies only the a.c. component, rejecting the d.c., so that before the video output can produce a picture, the lost d.c. component must be replaced. How can this be done? Well take a look at Fig. 4.

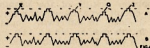


Fig. 4A.—Video Output before D.C. Restoration.

Fig. 4B.—After D.C. Restoration.

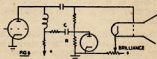
At Fig. 4A we see the signal just as it leaves the video amplifier. At "B" is the signal required to make the picture. What is the difference? Simply that the synchronising pulses (which represent maximum signal amplitude) all have the same level. Just think of it. Because the synch. pulses have a fixed amplitude, which is kept constant at the transmitter, it follows that if their amplitude be kept at a fixed level in the receiver's output, the rest of the video signal will assume correct shape.

So you don't believe me? Then look at it this way. Suppose the signal at Fig. 4A be applied directly to the grid of the c.r.t., together with a self-adjusting bias voltage so that whenever the maximum output falls below a certain level (such as at points X, Y, and Q), negative bias will decrease, permitting the signal level to increase, whereas at Z, where amplitude tends to exceed the required level, the negative bias will increase, so that the points of maximum signal (i.e. the synch. pulses) will be kept at the same level.

Now consider differences in signal, between these peaks, and the troughs between them. Is there any reason why these differences would be changed by the video amplifier? And for that matter, any reason why the amplitude difference between the troughs and synch. pulses in Fig. 4B should not be the same as those in the original signal? Well, if we are all agreed on this point, we will see at once that our lost d.c. component can be restored, by simply varying the grid bias on the c.r.t. so as to keep the peaks (i.e. the synch. pulses) at a fixed level. Try and reason this out before reading further.

So our d.c. restorer is simply a "self adjusting" grid bias source, similar to

a grid-leak detector. The basic circuit is shown in Fig. 5. Suppose the signal shown in the Fig. 4A be applied between points X and Y. At point Z (Fig. 4A) the charge on C (Fig. 5) will be increased, and since this represents the negative bias applied to the grid, the peak level will be reduced, whereas at X, Y, and Q less electrons will be drawn through the diode (Fig. 5), so that the negative bias will be reduced and the peak level therefore raised.



The location of this restorer in the circuit, of course, varies with different types of receivers, but its operation is the same. One system is shown in Fig. 6 (compare this with Fig. 3). Of course, for proper operation, the R/C combination must have the correct time constant.

Speaking of picture brilliance, it might be mentioned at this stage that the brilliance control, on a television receiver, operates by varying the grid bias on the c.r.t. One type is also illustrated in Fig. 6.

So much for the picture signal, and how it varies the brilliance of a spot of light, but to produce a picture, this spot must be kept moving, so we will now deal with deflection.

In articles one and three we learned that the spot of light on the receiver screen traces out 625 horizontal lines, in zig-zag fashion, 25 times per second or, to be more exact, 312½ lines, 50 times per second (refer back to article three, if necessary). This is achieved by applying two deflecting forces to the electron beam (in the c.r.t.) at the same time.

The first of these is the horizontal deflecting force which moves the beam from left to right at a uniform rate and then rapidly back to its starting point. This process is repeated at line frequency, i.e. 15625 times per second.

The other force moves the spot from top to base of screen at uniform rate, then rapidly back to its starting point. This is repeated at field frequency, 50 times per second.

Now consider a c.r.t. using magnetic deflection. The position of the electron beam (and spot) at any instant, depends upon the value of current flowing through the deflection coils. To move the spot in the manner described above, we must pass through each set of coils a current which increases from minimum to maximum at a uniform rate, then falls rapidly back to minimum, the process being repeated at the required frequency. In other words, the required current, if graphed, would have the "saw-tooth" wave form, as shown in Fig. 7.

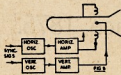


Each pair of deflection coils must therefore be coupled to a special oscillator which will supply this type of

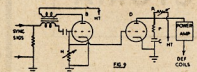
*A11426 L.A.C. Jarman, J. B., c/o A.R.D.U., R.A.A.F., Woomera S., South Australia.

current. Now these oscillators vary considerably in design, in fact, new improvements are developed almost daily. The objects are:—

1. Reduction in number of components for economy and compactness;
2. Improved linearity (uniform rate of increase being difficult to achieve in practice);
3. More accurate synchronisation (to be dealt with in next article).



Space will permit the description of only one system here, but they all follow the same general layout, shown in Fig. 8. Now some of you will have guessed that the old thyratron oscillator provides the answer. Well, admittedly, it is used in older sets, but it is now being superseded by circuits which are more stable, and permit better synchronisation (this will be explained in the next article) so we will temporarily regard it as obsolete, and study the "blocking oscillator" type, as shown in Fig. 9.



Capacitor C (Fig. 9) is charged by h.t. voltage through resistor R, so that the voltage across C will rise from minimum to maximum. Before this voltage reaches maximum, however, C must be rapidly discharged, so that process can be repeated. This is done by the discharge tube D (a vacuum type) which is normally biased to cut off, but periodically made conductive, by the sharp positive pulses supplied by the blocking oscillator, tube B.

The voltage across C is therefore "saw tooth" type and can be used to drive the deflection amplifier, but there is one important point to note. The current through the deflection coils must be as shown in Fig. 7. Now to overcome the effects of the coil's inductance, which tends to oppose changes in current, our driving voltage must be shaped as is shown in Fig. 10.



This is done by inserting the small resistor r in series with C (Fig. 9). Since the ratio A/a equals approximately R/r, our voltage can be adjusted in wave form to produce the required deflection current, and of course our deflection amplifier must be designed to preserve this wave form.

A G8PO Without Any "Cut and Try"

BY ROTH JONES,* VK3BG

Probably no antenna has created so much enthusiasm and argument over the last few years than the G8PO unidirectional beam.

Some members of the Amateur Radio Fraternity have had remarkable results with it; others have achieved little and pulled the antenna down in disgust, satisfied it would never work.

To the latter I say: "Don't give up in disgust. Read this article and put up another antenna to these simple formulae and it WILL work."

Unfortunately no ready formulae have been applied to the antenna and most users have had to be content with "cut and try" methods. This has involved hours and hours of patient work and the purchase of long lengths of twin lead.

Since the antenna was first introduced to this country by my esteemed friend Lieut. Commander E. H. ("Ted") Ironmonger, R.N. (ex-G8PO and ex-VK3WU) the designs which have followed have fallen into three chief categories. They are:—

- (1) Single wire flat top with 72 ohm co-axial cable feed line and delay section as used by VK3WU himself;
- (2) A three wire flat top with 300 ohm twin lead feed and delay lines; and
- (3) Single wire flat top with either the 150 ohm or 72 ohm twin lead feed line and paralleled one eighth lengths of 72 ohm and 150 ohm leads as delay lines.

Each system has its own specific merits. Co-axial feed line does not give the balance experienced with the twin lead, is expensive and always difficult to work and cut. The three wire flat top version is heavier and uses 300 ohm twin lead which is prone to moisture effect and breakage due to wind. The type used by the writer is extremely light, is not affected by rain to any great extent and does not move unduly in windy weather.

I claim no credit for the design, particulars of which were given by Harry Chapman, VK3GU, a veteran in our ranks who is still as enthusiastic over antennae as in the olden days.

Main secret of the system is the antenna loading coil and condenser which allows the whole antenna to be tuned, thus placing the standing waves where they should be.

It is assumed the centre impedance of the two dipoles spaced one-eighth wavelength is about 40 ohms. If the feed lines are an even multiple of quarter waves (less the velocity factor), then the impedance at the end of these lines will be 40 ohms irrespective of the transmission line impedance.

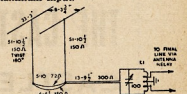
Therefore to match this impedance two separate one-eighth lengths (one 72 ohm twin lead and the other 150 ohm) are in parallel for the delay line, thus giving an impedance of approximately 40 ohms.

A quarter wave length of 300 ohm lead is then taken from the junction

of either feed line and delay line (depending of course which direction the antenna is firing). This is purely a step up transformer raising the impedance from 20 ohms (the 40 ohms at the end of the lead and in 40 ohms delay line being in parallel) to around 4,500 ohms.

This is connected directly across the ends of the tuned circuit, the tap for loading being taken one turn either side of the centre. To secure balance, the centre of the coil can be earthed or if a split stator is used its rotor can be connected to earth.

Tuning is simple and quick provided two hands are used. The coupling coil condenser is tuned for maximum current and the final for minimum. The former will be much sharper if the system is working satisfactorily. After a little bit of juggling, a point will be found where the point of maximum and minimum current will coincide. Extremely light coupling will suffice for maximum input.



L1—10 turns 2" diameter, self support.

Velocity Factor of Ribbon:—

300 ohms	0.83
150 "	0.78
72 "	0.7

Several systems can be used for switching but to avoid loss and keep the impedances constant, the writer has assembled four octal sockets and wired them so that if four small Bulgin plugs or crystal holders are plugged in they will be connected together. These plugs are also affixed to the ends of the feed lines, the two delay sections and the 300 ohm quarter wave transformer.

To change direction of firing the plug affixed to the 300 ohm quarter wave length has only to be switched from one socket to the other.

This allows the whole system to be switched quickly and, if necessary, the antenna used as a single section W8JK by discarding the delay lines and connecting the feed lines together after twisting one 180 degrees.

Results. Conditions have been very poor and erratic over the last two months the antenna has been installed, but sufficient DX has been worked to convince the writer the beam has a good two S points gain over a very efficient long wire which has worked more than its share of DX during the last few years.

The antenna has been cut for 14075 Kc. allowing band edge working for c.w. and phone in the 14100-14150 Kc. region.

It is fixed and directed at Europe where most stations report strength as above average. As an example, seven Europeans replied to a short CQ DX on a recent busy Sunday afternoon.

* 25 Panoramic Road, North Balwyn, E.9, Victoria.

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Australian National Field Day, 1952

RULES

1. The National Field Day Contest of the Wireless Institute of Australia will be held on Sunday, 27th January, 1952. The Contest will be of twelve hours duration commencing at 0900 hours E.A.S.T. and concluding at 2100 hours E.A.S.T.

2. The Contest is limited to portable stations operating within the Commonwealth and its Mandated Territories on a power not exceeding 25 Watts with the antenna connected.

3. A portable station for the purpose of the Field Day is defined as one whose power is not obtained from either private or public mains, shall not be located closer than five miles to the home location of the operator(s) and shall not be situated in any occupied dwelling.

4. No apparatus is to be set up or erected on the site of the portable station earlier than 24 hours prior to the commencement of the Contest. A station may be moved from one site to another within the same State during the period of the Contest.

5. More than one operator may be used in the operation of the portable station provided that all operators are licensed Amateurs.

DX Operation may be on any of the recognised Amateur bands and more than one transmitter may be used, providing that one transmitter only is used at any one time.

6. When calling, CQ stations will use the call "CQ PD" and phone stations will use the call "CQ Field Day" to indicate they are portable. No attention is directed to the requirements for portable operation as defined in the P.M.G.'s Handbook for the Guidance of Amateur Operators.

7. SECTIONS. The Contest is divided into three sections, namely, Open, C.W., and Phone. The Open Section shall consist of both phone

and c.w. Participants may enter all Sections provided a separate Log is entered in each case.

8. Logs must be forwarded through the Division to reach the Federal Contest Committee, Box 1734JJ, G.P.O., Sydney, not later than the 27th February, 1952.

9. Logs must show the location of the portable station, names and call signs of the operator(s) in the party, a description of the transmitter(s), receiver(s), antenna(s), and the power supplies. The power input to the final stage(s) with the antenna(s) connected (which must not exceed 25 watts) must also be shown.

10. Log entries are to be in the following order: Date, time (E.A.S.T.), station worked, Amateur band used, report sent, report received, contact points claimed, bonus points claimed, QTH of station worked and portable operator's call. A summary at the conclusion of the Log will facilitate checking.

11. The completed Log must be signed by each of the operators with a statement that the P.M.G.'s Regulations and the Rules of the Contest have been observed and that the operators agree to accept the decision of the Federal Contest Committee on all matters pertaining to the Contest.

12. SCORING. For the purposes of the Field Day, the following constitute VK Districts: VK2, VK3, VK4, VK5 (South Australia), VK6 (Northern Territory), VK6, VK7, and VK8.

13. Serial numbers must be exchanged during the Contest as follows: The first three figures will be the RST in the C.W. Section followed by the serial number of the contact commencing with any number between 1 and 100 for the first contact and increasing by one for each successive contact. In the Phone Section the first two figures will be RS and then as in the C.W. Section. In addition the QTH must also be given.

15. Points will be awarded as follows—

- (a) For contacts with a fixed station within the Commonwealth (Rule 13) including the competitor's State 1
- (b) For contacts with other portable stations in the contest within the same State 2
- (c) For contacts with stations in Asia, North America and Oceania (outside the Commonwealth, Rule 13) 3
- (d) For contacts with stations in Europe 5
- (e) For contacts with stations in Africa and South America 7
- (f) For contacts with other portable stations outside the State 10
- (g) A bonus for each Continent worked on each band. For Oceania the contact must be outside the Commonwealth (Rule 13) add to the final score 25
- (h) A bonus for each new State or Country worked on 50 Mc., add to the final score 25
- (i) A special bonus for each Interstate or Overseas contact on 144 Mc., add to the final score 50

16. AWARDS. An attractive certificate will be awarded to the outright winners in each State, namely, Open, C.W., and Phone. Certificates will also be awarded to the winner in each State in each Section. Further, Certificates can be awarded at the discretion of the Federal Contest Committee. The outright winners are not eligible for State Awards.

17. Certificates will be awarded to each operator of the winning stations provided each operator has contacted 25% of the stations contacted.

18. In addition to the Certificates for the outright winners, an order to the value of Three Guineas, to be divided between the placemen in each section, will be awarded for the purchase of a trophy or equipment.

The Jubilee Relay Results

The Jubilee Relay has been won by Stan Celeston, VK3XR, with the fine score of 27,410 points, which followed by Keith Schleicher, VK4RS, with 25,480 points.

9KK used three bands, whilst 4KS used two bands but on the second band had only one contact.

ZLJHA was the highest scoring station in New Zealand with 22,592 points and in addition had the greatest number of contacts in VK-ZL, viz., 535, but could only manage 64 contacts.

The interest shown in ZL was not very great and as far as Australia concerned it is quite safe to say that twice as many stations were heard relaying the message than the number who actually sent on Logs.

The DX worked by both 9KK and 4KS was outstanding and a lot of credit is due to these chaps for keeping known the Jubilee VK-ZL DX Contest in some of the remote corners of the globe.

Call	Bands	Ctries	Contacts	Points
VK9XX	3	80	343	27440
VK4KS	2	80	331	26480
VK2JA	1	64	333	25592
VK2AMR	2	78	276	21528
VK2AHA	4	94	219	20586
ZLJAG	1	62	261	16182
VK5DR	2	98	244	14152
VK3EN	1	64	141	9024
VK3LW	1	38	81	4710
VK3DOW	1	44	105	4620
VK3JE	1	38	81	3078
VK3LC	1	38	78	2925
VK3LW	1	38	78	2946

In VK2, Tom Stroud 2AMR had a fine job having 376 contacts in 78 countries, all on phone. 2AMR was closely followed by 2AHA who used four bands. The first three places in VK2 were filled with country Amateurs who followed up the good work done in R.D. Contest by country members. 2AYE also decided to show the gang that he could work DX as well as matter to country membership and ran up 30 countries in 50 contacts.

In Victoria, Len Moncur, 3JLN, did a fine job on phone with 141 contacts in 64 countries. DX man 3JE also contacted more than 100 nice stations like VQ8, VP9, and YO. 3XB got among the Ws on 7 Mc.

3DR, on Kangaroo Island, using 15 watts was able to supply to an 897 put up quite a remarkable performance. Oh yes, of course, he has a few vee beams but nevertheless 14,152 points

on 14 Mc. is pretty good going. George Luxon 5RX, if my memory serves me rightly, made all his contacts in the first 10 hours of the morning. SLC wants a separate award for phone and c.w. and also commented on the manner in which the message was relayed. I was forwarded; thanks for your remarks OM.

Jimmy Rumble, 6RU, threatens the Eastern States in the Jubilee VK-ZL.

From the Logs, 3283 messages were handled and it is safe to say that every country in the world knew of the Jubilee and the VK-ZL Contest.

NEW SOUTH WALES

Call	Bands	Ctries	Contacts	Points
VK2AMR	2	78	276	21528
VK2AHA	4	94	219	20586
VK2JW	1	44	105	4620
VK2VW	1	37	60	2220
VK2AYE	2	30	50	1500
VK2MT	1	14	24	828
VK2OA	1	19	27	510
VK2KJ	1	17	30	513
VK2ASJ	1	15	10	270
VK2ZC	1	13	12	132
VK2ARV	1	5	22	110
VK2TI	1	10	10	100
VK2DI	1	10	10	100
VK2RA	2	7	9	63

VICTORIA

Call	Bands	Ctries	Contacts	Points
VK3LN	1	64	141	9024
VK3JE	1	38	81	3078
VK3XB	2	28	73	2044
VK3XO	1	24	63	1512
VK3ADW	1	12	14	120
VK3ACW	1	11	15	185
VK3AB	1	7	17	110
VK3AH	1	10	10	60
VK3AJ	1	4	4	16
VK3ABP	1	2	3	6
VK3BS	1	2	2	4

QUEENSLAND

Call	Bands	Ctries	Contacts	Points
VK4KS	2	80	331	26480
VK4KW	1	15	21	315

SOUTH AUSTRALIA

Call	Bands	Ctries	Contacts	Points
VK5DR	1	58	244	14152
VK5RX	1	39	121	4719

VK3SL	1	39	75	2325
VK3CE	1	4	8	32
VK3EH	1	2	2	4

WESTERN AUSTRALIA

Call	Bands	Ctries	Contacts	Points
VK6RU	2	39	64	2496
VK6VW	1	30	48	1440

PAPUA

Call	Bands	Ctries	Contacts	Points
VK9XK	3	80	343	27440

NEW ZEALAND

Call	Bands	Ctries	Contacts	Points
ZL1ADX	1	16	23	368
ZL1QW	2	8	9	72

2nd District

Call	Bands	Ctries	Contacts	Points
ZL2HG	1	2	2	4

3rd District

Call	Bands	Ctries	Contacts	Points
ZL3IA	3	64	353	22962
ZL3AQ	2	16	34	544

4th District

Call	Bands	Ctries	Contacts	Points
ZL4GA	2	62	261	16182

—Federal Contest Committee.

SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

VK3WI ACCURATE FREQUENCY TRANSMISSIONS FOR 1952

During last year, four Accurate Frequency Transmissions were made from VK3WI. These transmissions were made possible with the help of the Frequency Measuring Station at Mont Park, and the thanks of the Victorian Division are hereby extended to those boys at that Centre.

Through a suggestion by one of our members, a slight change will be made in two of the Accurate Frequency Transmissions for this year.

For example, on the first 40 metre transmission on Thursday, 28th February, VK3WI will commence on 7000 Kc. with a band edge marker, which will enable members to set their dial calibrations made on the last broadcast of 1951, then VK3WI will shift to 7010, 7030, and so on at 20 Kc. intervals.

By providing 20 Kc. points from 7000 Kc. on one broadcast and 20 Kc. points commencing at 7010 Kc. on the next broadcast, calibration will in future be possible at 10 Kc. intervals on the 7 Mc. band.

On 3.5 Mc. band the same principle will apply, the alternate 30 Kc. intervals giving 15 Kc. points by the use of the two broadcasts this year.

Dates for the next twelve months are as follows:—

- Thursday, 28th February, 7 Mc. Band. Band edge marker on 7000 Kc., then 7010 Kc., 7030 Kc., etc., at 20 Kc. intervals.
- Thursday, 29th May, 3.5 Mc. Band. At 30 Kc. intervals, commencing at 3500 Kc.
- Thursday, 28th August, 3.5 Mc. Band. Band edge marker at 3500 Kc., then 3515 Kc., 3545 Kc., etc., at 30 Kc. intervals.
- Thursday, 27th November, 7 Mc. Band. At 20 Kc. intervals, commencing at 7000 Kc.

The operating procedure and times of transmissions are as follows: 9.5 p.m., phone transmission on 7196 Kc., with a general call, and information on what is about to take place. 9.15 p.m., VK3WI changes frequency to 7000 Kc. and calls as follows on c.w. at 12 w.p.m. "A1T (three times)", DE VK3WI (three times), then — QRG — 7000 Kc. (twice)." The key is then held down for one minute, then "QSY 7020 Kc. (twice), DE VK3WI (once), AR."

DX C.C. LISTING

PHONE

Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 158	VK3KW	4 145
VK3JD	1 155	VK4KS	9 135
VK3BZ	3 154	VK3LN	11 132
VK4H	12 151	VK3OD	10 128
VK6RU	2 148	VK3JE	7 123

C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK3CN	1 151
VK3PH	15 167	VK6SA	28 150
VK4R	13 163	VK3VW	14 143
VK4H	8 154	VK3QL	5 141
VK3EO	2 152	VK3KB	10 138

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	2 113	VK3DI	2 170
VK4H	7 190	VK3KX	1 167
VK6RU	8 181	VK6KW	13 165
VK3JE	12 180	VK4EL	10 163
VK3HG	3 171	VK4FT	32 155

The transmitter then commences operation on 7020 Kc. and the procedure is repeated until 7200 Kc. is reached, after which there will be a phone transmission on 7196 Kc. and if corrections are immediately available, they will be broadcast at this time, also on the following Sunday broadcast over VK3WI.

The 80 metre transmissions will be the same as the former, only the voice will call on 3598 Kc. and then the checks will start on 3.5 Kc. and finish on 3.8 Kc. with the exception that the checks will be given every 30 Kc.

ACCURATE FREQUENCY TRANSMISSION RESULTS

The following is the official results of the Accurate Frequency Transmission from VK3WI on 22nd November, 1951, on the 7 Mc. band:—

7000 Kilocycles	45 cycles low
7020	" 0 "
7040	" 50 "
7060	" 40 "
7080	" 4 " high
7100	" 16 "
7120	" 0 "
7140	" 8 "
7160	" 8 "
7180	" 14 "
7200	" 6 "

AMATEUR CALL SIGNS

FOR MONTH OF OCTOBER, 1951

ADDITIONS

VQ—New South Wales
29V—P. H. Sara, Hyde St., Bellingen.
2ANY—E. E. Hayles, 8 Smith St., Wollongong.
2AWH—H. L. Wright, 33 Carrington St., Bexley.
2AWU—W. Schreuer, 29 Smith St., Summer Hill.

Victoria

3GT—G. E. Lewis, 10 Henderson St., West Brunswick.
3IC—T. K. Tennant, 26 Wilson Avenue, Tatura.
3SG—L. R. Dwyer, Newry, Geelong.
3AEB—A. E. Bridge, McBean Ave., Lower Macedon.
3AJQ—J. R. King, 1 Kardella St., East Malvern, S.E.S.
3APK—P. C. Perkins, 182 McKillop St., Geelong East.
3AXR—C. G. Williams, 6 Woodfull St., East Prahran, Melbourne.

Queensland

4RI—R. H. Gordon, 17 Goldring St., Rising Sun, Townsville.
4TG—A. H. Burton, Mobile: S.S. "Cape Leeuwin" Postal: Stewart St., Clayfield, Brisbane.

South Australia

5JJ—J. C. Jennison, 2 Cross St., Enfield.
5OK—L. F. Brice, Flat 2, Cecil Mansions, 14 Rundle St., Kent Town.

Western Australia

6TK—T. W. Kelly, 39 Princep St., Norseman.
6VB—V. R. Birks, Robinson St., Broome.

Tasmania

7CJ—A. E. Finch, 12 Augusta Rd., New Town, Hobart.

ALTERATION

VK—New South Wales
2LB—14 Landers Road, Lane Cove.
2OE—35 Filzoy Street, Grafton.
20L—17 Oaks Avenue, Dee Why.
20P—41 Beresford Road, Strathfield.
20N—30 Byron Street, Inverell.

THOSE MISSING NOTES

Although correspondents were requested in the November issue to forward copy for the January issue by the 1st December, some failed to do so. We regret that it was not possible to wait for their copy, as we had to go to press earlier than usual for this issue.

2YW—11 Young Street, Wagga Wagga.
2AWK—477 New South Head Road, Double Bay.

Victoria

3MH—Rutherford Street, Swan Hill.
3TX—5 Corrie Street, Ashburton, S.E.11.
3WY—43 Rowen Street, Burwood, E.13.
3ABP—43 Macalister Street, Sale.
3ABP—62 York Street, Sale.
3ACT—51 Deakin Street, Essendon West.
3AJB—Lewellin Grove, Carrum.
3AKS—147 Patterson Road, Moorabbin, S.20.
3ANC—Corner Lydiard Road and Dowling Street, Traralgon.
3ATC—71 Tucker Road, Moorabbin, S.20.

Queensland

4AO—249 Buckland Rd., Wavell Heights, Brisbane.
4TT—90 Lamington Ave., Eagle Farm, Brisbane.
5DP—63 Victoria Ter., Kingswood Park.
5DV—Burbridge Road (North East corner of Euston Street), Brooklyn Park.
5KB—17 Northgate St., Uncle Jack, Adelaide.
5TS—Hut 27B, Nightcliff, Darwin.
6RC—Wattle Street, Osborn Park, Western Australia.
6RC—Wattle Street, Osborn Park, Tasmania.
7MY—"Waterloo," Sandford.

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FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

The 50 Mc. DX season is well into its swing with reports of break throughs from far and wide. Highlight of the recent news is the contact between VK3ER, at McCrae, and VK3XK in New Guinea on the evening of the 1st December, 1951. 5XK was also heard in Melbourne but no contacts were made in spite of the heavy rain on the evening. It is understood that Russ also made contact with VK4 stations but no details are yet to hand.

NEW SOUTH WALES

At the November meeting of the V.H.F. Group, Bob Black, 2QZ, resigned from his position as chairman and Bill McGowan, 2MQ, was elected in his place. Bob will be leaving Sydney shortly for a trip to the islands (work, not pleasure) where he will be operating on the lower frequencies with a Type 3 Mark II. We hope that on his return to VK2 he also returns to the v.h.f. bands.

Dr. Helen Turner delivered the lecture for the evening the subject being the limitation of measurements. Dr. Turner, whilst knowing very little about radio matters, was able to demonstrate the correct method of conducting an experiment designed to prove whether horizontal or vertical polarisation was better on 576 Mc. This subject having been raised in controversy of late, those present were extremely interested. Bill 2MQ proposed a vote of thanks which was enthusiastically received.

Cec Cronan also resigned from the position of secretary during the evening and his place is to be taken by Ian Jones. Ian Jones, who has taken on a new job which will not allow him to attend all meetings but no doubt his interest in the group will continue as before. 50 Mc. News: The 50 Mc. band has really come up with a bang and whilst VK2 has not yet worked VK8 this season, all other States and ZL have been worked. Operations to VK3 have, as usual, been the most frequent but there was one very good opening to VK4 early in the month. 2RU was the first to contact. Interstate this year—Major must monitor 50 (or 3V) Mc!

VK1 was heard during the morning of 23rd Nov. when 6FC was heard calling CQ. All efforts to raise him failed. On the 28th the band showed a short quiet condition, stations heard in Sydney being 2IC, Nabrri, 2ADE, Casino and 2LH. Grafton. 2IC worked 2RU, this giving him his first contact with VK2! 2JX has bobbed up again, this time at Wentworth Falls where he is a near neighbor of Cn ZL. Peter should do well from this location and may serve as a very convenient halfway house between Sydney and the Western Zone chaps.

2WH in Forbes amongst the DX, but reports that generally the VKs go right over his head. 2AMV is minus beam at the moment—a great time to be caught with your beam down John! But also, by also being able to get a dipole erected on the roof and is now getting much better results than before, both with the DX and the boys up north.

1st New Year's important items this month concern the contacts over the Blue Mts. to Bathurst. 2NS has succeeded in making two way contact with 2MQ and is much elated as a result. He has also heard 2AJZ and 2ANF and been heard by the latter. Trevor has almost completed a five over five beam, and will shortly be running close on 100 watts to an SSB, so he should be fairly easy to contact. 2WH has been heard by 2MQ and 2ANF but has so far been unable to get any Sydney stations. 2WH recently allocated country zone—144.0 to 144.1 Mc. has proved extremely valuable in searching for the country stations and appears to be working out very well.

2TA is working regularly with 2WH although as yet no two-way contact has been established.

mainly because 2TA has no Rx. However he has just the equipment for 238 Rx so won't be long. It was implied in this hole in last month that the path from 2TA to 2WH was over flat plains but this is not so as your scribe has been reminded on a number of occasions.

In Sydney, activity has decreased somewhat for no apparent reason. Could be the boys are re-building in order to get back into the contacts. 2JY was heard complaining recently that nobody tunes the high end of the band. Jim operates on 147 and 148 and doesn't forget to tune up that way. 2AH active on 147 again; Alan building a crystal controlled converter with 2KJ and pair 12AT7A. 2OA puts out an excellent signal from Mt. St. Leonards. 576 Mc. News: Activity appears to have waned on this band, the only regulars being 2WJ and 2AJZ who may be heard most nights working cross band to 144. Considering the number of ASB7 Rx's the boys got hold of recently, this seems surprising.

VICTORIA

Next meeting of the Group is on 16th January at the Royal Hotel for the lecture for the evening will be announced on 3WI broadcasts.

Attendance at the October meeting was up to the usual standard and Mr. Rhum's illustrated lecture on the 50 Mc. band was well received. This dealt with fading and other phenomena encountered during tests with 2KJ and 2JQ. Mc. on various stages of the path between Melbourne and Sydney. It was interesting to note that considerable fading could occur at these v.h.f.s. and that this was most marked over the longest stages where the direct line from the Tx on one mountain peak to the Rx on another peak passed very close to the earth. Mike 2JQ asked many questions and chatted informally with the active 576 Mc. members present.

2ATH was present at the November meeting and a warm welcome was extended to a visitor from Broken Hill, 2DQ who is spending the winter or so of his leave in Melbourne. Dud says that many of the boys on 50 Mc. do not realise his location is 750 miles from Sydney and that he is often passed over by the active VK2 when the band opens up for him. It was unfortunate that our lecturer, Mr. J. Mansergh, of the P.M.G. Dept., who was to discuss the 232 when using it as a converter for 144 Mc.

During discussion of the field day results, there were one or two unfavorable comments about the difficulty of securing contacts when using frequencies between 146 and 148 Mc. and of QRM on frequencies near 144 Mc. The gentlemen's agreement mentioned in the VK2 notes on this page of the November issue has much to commend it and it could well be adopted here also; what do you think, fellows?

Fine weather prevailed for the November Field Day, number two of the series, and many interesting contacts were made. Pride of place must go to the 144 Mc. contact between 2PN located at The Grange, a 4715 ft. peak near Kiandra, and 3UI at Mt. Major in Northern Victoria. This is the first VK2-VK3 contact on 144 Mc. and although the distance is 200 miles, is less than that covered by 3LS at Mt. Hotham and 3AKE some two years ago, it is none the less an important event which, we hope, may lead to more activity on 144 Mc. by Hams in Southern N.S.W. and Northern Victoria. 2PN's signals, 58 to 59 at Mt. Major, were also heard by 3CI at Nagambie, 200 miles and it is unfortunate that 58 was unable to make contact. 2PN used 582 Tx and Rx and 3UI used a home brew Tx with 20 watts input and a crystal controlled converter with a Command Rx. Antennae were simple 3 and 4 element parabolic beams. 3UI's were heard by 3FJ at Arthur's Seat, but due to QRM on 3UI's frequency, no contact was made, distance 140 miles.

Another record was made when 3GM, on Mt. Buninyong, worked 3DA, Caulfield, on 576 Mc., distance 62 miles. Other portable stations were 3ACH, Mt. Macedon; 3AJZ, Pakenham; 3JG, Maryborough; and 3JO, Mt. St. Leonards. Main field day activity was on 144 Mc. though 50 and 576 Mc. were also used.

3AKE has been operating portable on 576 Mc. each Thursday evening and he has worked into Melbourne on several occasions. Other stations active on 576 Mc. were 2XJ, 2ALF, 2Q and 3AUX. No information of 288 Mc. activity is to hand, but on 144 Mc. the following stations have been active in recent weeks: 3ABA, 3YS, 3GM, 3ZL, 3GU, 3ASL, 3RK, 3FO, 3BH, 3UG, 3EN, 3AKE, 3ED, 3YJ, 3ADU, 3AUZ, 3CF, 3BW,

3ALH, 3KT, 3UI, 3CI, 3ZD, 3WS, 3ML, 3ZV, 3JH, 3KA, 3BQ, 3CW, 3ACB, 3ABY, 3ATZ, 3OJ, 3ACH, 3CI, 3OS and 3JO. Count stations active 3UI, 3CI, and 3ZD complain that they hear Melbourne stations working each other but that unless they make a dash they are unable to make contact. How about adopting the procedure used on 56 Mc. pre-war when stations in contact passed on the how to listen over the band for calls from any other station.

SOUTH AUSTRALIA

November has been brightened by the number of constant break throughs much to the delight of the 50 Mc. gang.

A study of weather maps in conjunction with break throughs show up to now that where a good front is between the two places there is a good chance of a break through. This will be studied over the whole of the next few months before commitments are made. During November all States plus ZL have worked and the DX season like all the others will be extra good and also for the V.h.f. Contest.

It is pleasing to note that some of the country chaps are becoming active. 5AX was heard in 58Q with VK4 one night and 5XL has been carrying out tests with 5BC/5MA. 5CN, at Darwin, is still active but no new dope received this month.

There are now VKs active, or will be soon—9XK, 9GU and 9MF. This should ensure plenty of activity from that tropical island.

5A has a tower and is busy building a beam to put atop of it. Still finds time to natter and work a little DX on a dipole. 2ADT did not work a number of SRTs mysteriously since didn't even when Bob put the carrier back in it.

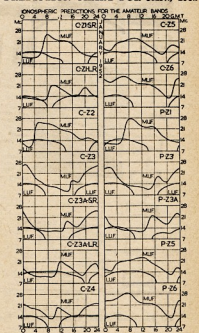
The Ross Hull Contest will be losing a lot of supporters soon if the trophy does not soon turn up. Two people have won it, one person reports seeing a photograph of it.

5QR and 5GL can be heard crossband 50/144 Mc. trying to fathom out how to get enough drive on 588 for their respective rigs. As is not a summer tourist on 58 Mc. Activity will live up from Mallala on 288 Mc. again soon when a call sign is allotted to one of the boys up there. 5BC gets amongst the DX and the list Hughie worked recently was very imposing. 5BC has missed a lot of break throughs due to shift work; you haven't got that on your own either.

5GJ, 5ZL, 5JG, 5MK, 5HD, 5GL and 5OQ have been heard regularly on 50 Mc. There has been nil reports on 288 Mc. activity from the local gang.

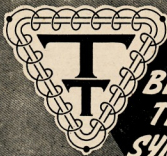
Vh the Xmas festivals behind us we, in VK5, wish all v.h.f.ers good hunting for and during 1952.

PREDICTION CHART FOR JAN., 1952



50 Mc. W.A.S.

Call	Certificate Number	Additional Number	Countries
VK2VJ	13	3	
VK2AR	9	2	
VK2VW	9	2	
VK2LC	1	1	
VK2KJ	3	1	
VK2HR	9	2	
VK2PG	8	1	
VK2R	6	1	
VK2BT	7	1	
VK2AE	10	1	
VK2XZ	11	1	
VK2AX	11	1	
VK2AL	11	1	
VK2AC	14	1	
VK2ABC	8	2	



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UCC

INFORMATION BULLETIN

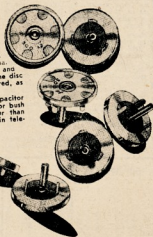
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65/HP3

DX Countries of the World

The list of countries as hereunder, and as amended from time to time in Federal Notes, is the Official List to be used in connection with the issue of the Australian DX C.C. Award, and is also the official list used by the A.R.R.L. for their award.

The list below shows first the country, the Zone number in parenthesis (as used by the "CQ" W.A.Z. Award) and the Amateur Prefix.

Aden & Socotra Is. (21) VS9
 Afghanistan (21) YA
 Alaska (1) KL7
 Albania (15) ZA
 Aladabra Islands (39) FA
 Algeria (33) FA
 Andaman & Nicobar Is. (26) VU5
 Andorra (14) PX
 Anglo-Egypt Sudan (34) ST
 Angola (36) CR6
 Antarctica (13) KC4
 Argentina (13) LU
 Ascension Island (36) ZD8
 Australia (inc. Tas.) (29, 30) VK
 Austria (15) (MB9), OE
 Azores Islands (14) CT2
 Bahama Islands (8) VP7
 Bahrain Island (21) MP4
 Baker, Howland & Am. Phoenix Is. (31) KB6
 Balearic Islands (14) EA6
 Barbados (8) VP6
 Basutoland (38) ZB8
 Bechuanaland (38) ZS9
 Belgian Congo (36) OQ5
 Belgium (14) ON
 Bermuda Islands (5) VP9
 Bhutan (22)
 Bolivia (10) CP
 Bonin & Volcano Is. (Iwo Jima) (27) KG6
 Borneo, Brit. Nth. (28) VS3
 Borneo, Netherl'ds (28) PK5
 Brazil (11) PY
 Brunei (28) VS5
 Bulgaria (20) LZ
 Burma (26) XZ
 Cameroons, French (36) FE
 Canada (2, 3, 4, 5) VE, VO
 Canal Zone (7) KZ5
 Canary Islands (33) EA8
 Cape Verde Is. (35) CR4
 Caroline Islands (27) KC6
 Cayman Islands (8) VP5
 Celebes & Molucca Is. (28) PK6
 Ceylon (22) VS7
 Chagos Islands (39) VQ8
 Channel Islands (14) GC
 Chile (12) CE
 China (23, 24) (B), C
 Christmas Is. (29) ZC3
 Clipperton Is. (7) FO8
 Cocos Island (7) TI
 Cocos Islands (29) ZC2
 Colombia (9) HK
 Comoro Islands (39) FB8
 Cook Islands (32) ZK1
 Corsica (15) FC
 Costa Rica (7) TI
 Crete (20) SV
 Cuba (8) CM, CO
 Cyprus (20) (MD7), ZC4
 Czechoslovakia (15) OK

Denmark (14) OZ
 Decanese Is. (Rhodes) (20) SV5
 Dominican Republic (8) HI
 Easter Island (12) HC
 Ecuador (10) SU
 Egypt (34) (MD5), SU
 Eire (Irish Free State) EI
 England (14) G
 Eritrea (37) (MD3), MI6
 Ethiopia (37) ET
 Faeroes, The (14) OY
 Falkland Islands (13) VP8
 Fanning Is. (Washington Is.) VR3
 Fiji Islands (32) VR2
 Finland (15) OH
 Formosa (24) C3
 France (14) F
 French Equa. Africa (36) FQ
 French India (22) FN
 French Indo-China (26) FI
 French Oceania (Tahiti) FO
 French West Africa (35) FF
 Fridtjof Nansen Land (Franz Josef Land) (40) UA1
 Galapagos Is. (10) (HC8)
 Gambia (35) ZD3
 Germany (14, 15) DL
 Gibraltar (14) ZB2
 Gilbert, Ellice & Ocean Is. (31) VR1
 Goa (Portugese India) (22) CR8
 Gold Coast (and British Togoland) (35) ZD4
 Greece (20) SX
 Greenland (40) OX
 Guadeloupe (8) FG
 Guantnamo Bay (8) KG4
 Guatemala (7) TG
 Guiana, British (9) VP3
 Guiana, French, and Inini (9) FY
 Gulana, Netherlands (Surinam) (9) PZ
 Guinea, Portugese (35) CR5
 Guinea, Spanish (35)
 Haiti (8) HH
 Hawaiian Islands (31) KH6
 Heard Island (39) VK1
 Honduras (7) HR
 Honduras, British (7) VP1
 Hong Kong (24) VS6
 Hungary (15) HA
 Iceland (40) TF
 Ifni (33)
 India (22) VU
 Iran (21) EP, EQ
 Iraq (21) (MD6), YI
 Ireland, Northern (14) GI
 Isle of Man (14) GD
 Israel (20) 4X4
 Italy (15) I
 Jamaica (8) VP5
 Jan Mayen Island (40)
 Japan (25) JA
 Jarvis & Palmyra Is. (31) KP6
 Java (28) PK
 Johnston Island (31) KJ6
 Kenya (37) VQ4
 Kerguelon Is. (39) FB8
 Korea (25) HL
 Kuwait (21) (VT1), MP4
 Laccadive Is. (22) VU4
 Lebanon (20) AR8
 Leeward Is. (8) VP2

Liberia (35) EL
 Libya (34) (MC1, MD1, MD2, MT2) HE1
 Liechtenstein (15) LX
 Luxembourg (14) CR9
 Macau (24) VK1
 Macquarie Is. (30) FB
 Madagascar (39) CT3
 Madeira Islands (33) VS1, 2
 Malaya (28) VS9
 Maldives Islands (22) ZB1
 Malta (15) C9
 Manchuria (24) KG6
 Marianas Is. (Guam) (27) ZS2
 Marion Is. (and Prince Edward Is.) (39) ZS2
 Marshall Islands (31) KX6
 Martinique (8) FM
 Mauritius (39) VQ8
 Mexico (6) XE
 Midway Island (31) KM6
 Miquelon & St. Pierre Is. (5) FP
 Monaco (14) 3A2
 Mongolian Rep. (Outer) (23) (JT)
 Morocco, French (33) CN
 Morocco, Spanish (33) EA9
 Mozambique (37) CR7
 Nepal (22) VU7
 Netherlands (14) PA
 Netherlands West Indies (9) PJ
 New Amsterdam Is. (29) FB8
 New Caledonia (32) FK
 New Guinea, Neth. (28) PK7
 New Guinea, Territory of (28) VK9
 New Hebrides (32) FU, YJ
 New Zealand (32) ZL
 Nicaragua (7) YN
 Nigeria (35, 36) ZD2
 Niue (32) ZK2
 Norfolk Island (32) VK9
 Norway (14) LA
 Nyasaland (37) ZD6
 Oman, Trucial (21) MP4
 Pakistan (22) AP
 Palau (Pelew) Is. (27) KC6
 Palestine, Arab (20) ZC8
 Panama (7) HP
 Papua Territory (28) VK9
 Paraguay (11) ZP
 Peru (10) OA
 Philippine Islands (27) DU
 Phoenix Is. Brit. (31)
 Pitcairn Island (32) VR6
 Poland (15) SP
 Portugal (14) CT1
 Principe & Sao Thome Is. (36) KP4
 Puerto Rico (8) FR
 Reunion Island (39) FR
 Rhodesia, North. (36) VQ2
 Rhodesia, Southern (38) ZE
 Rio de Oro (33) (EA8)
 Roumania (20) YO
 Ryukyu Is. (Okinawa) (25) KR6
 Sealand (15) 9S4
 St. Helena (36) ZD7
 Salvador (7) YS
 Samoa, American (32) KS6
 Samoa, Western (32) ZM
 San Marino (15) (M1)
 Sarawak (28) VS5
 Sardinia (15) IS
 Saudi Arabia (Hebjaz & Nejd) (21) HZ

Scotland (14) GM
 Seychelles (39) VQ9
 Siam (26) HS
 Sierra Leone (35) ZD1
 Sikim (22) AC3
 Solomon Is. (28) VR4
 Somaliland, British (37) (MD4), VQ6
 Somaliland, French (37) (MD4), FI
 Somaliland, Italian (37) (MS4, MD4)
 South Georgia (13) VP8
 South Orkney Is. (13) VP8
 South Sandwich Is. (13) VP8
 South Shetland Is. (13) VP8
 Southwest Africa (38) ZS3
 Soviet Union:
 European R.S.F.S.R. (16) UA1, 3, 4, 6
 Asiatic R.S.F.S.R. (17, 18, 19) UA9, 0
 Ukraine (16) UB5
 Belorus'n S.S.R. (16) UC2
 Azerbaijan (21) UD6
 Georgia (21) UF6
 Armenia (21) UG6
 Turkmen (17) UH8
 Uzbek (17) UI8
 Tadzhik (17) UJ8
 Kazakh (17) UL7
 Kirghiz (17) UM8
 Karelo-Finnish Republic (16) UN1
 Moldavia (16) UO5
 Lithuania (15) UP2
 Latvia (15) UQ2
 Estonia (15) UR2
 Spain (14) EA
 Sumatra (28) PK4
 Svalbard (Spitzbergen) (40) (LA)
 Swan Island (8) KS4
 Swaziland (38) ZS7
 Sweden (14) SM
 Switzerland (14) HB
 Syria (20) YK
 Tanganyika Ter. (37) VQ8
 Tangier Zone (33) EK
 Tannu Tuva (23) (TT)
 Tibet (23) AC4
 Timor, Portugese (28) CR10
 Togoland, French (35) FD
 Tokelau (Union) Is. (31)
 Tonga (Friendly) Is. (32) VR5
 Transjordan (20) ZC1
 Trieste (15) IT, AG2, MF2
 Trinidad & Tobago (9) VP4
 Tristan da Cunha and Gough Is. (38) ZD9
 Tunisia (33) (FT) 3V8
 Turkey (20) TA
 Turks & Caicos Is. (8) VP5
 Uganda (37) VQ5
 Union of S. Africa (38) ZS
 United States of America (3, 4, 5) K, W
 Uruguay (13) CX
 Vatican City State (15) HV
 Venezuela (9) YV
 Virgin Islands (8) KV4
 Wake Island (31) KW6
 Wales (14) GW
 Windward Is. (8, 9) VP2
 Wrangel Island (19)
 Yemen (21) (4W)
 Yugoslavia (15) YU
 Zanzibar (37) VQ1

RAAF

VACANCIES FOR RADIO ENGINEER OFFICERS

The Royal Australian Air Force invites applications from suitably qualified men for appointment to Permanent and Short Service Commissions as Radio Engineer Officers.



FOR A PERMANENT COMMISSION applicants must be normally not more than 25 years of age, and hold a University degree in Engineering (preferably electrical) or in Science (preferably in physics, mathematics, and electronics), or hold a diploma in Engineering (preferably electrical or radio) which gives complete exemption from the Associate Membership Examination of the Institution of Engineers, Australia. Diploma candidates must also have not less than two years' experience in engineering after completion of diploma or have had war service in any of His Majesty's Forces, or be qualified to commence the first year of study for a University degree in Engineering or Science.

FOR A SHORT SERVICE COMMISSION (of 4 years with an extension for any period not exceeding three years). Applicants should be under 45 years and have held an appropriate technical appointment as an officer in His Majesty's Services or have completed an apprenticeship or comparable training in radio engineering, followed by at least five years' experience in that trade. Claims of applicants who have held Warrant or N.C.O. rank in a technical mustering will be given special consideration. Officers serving on Short Service Commissions are eligible for Permanent Commissions. All applicants must be British subjects of substantially European descent.

DUTIES include the inspection, servicing, maintenance, operation specification, development and supervision of design of telecommunications and radar equipment, airborne and ground, practical radio research and practical application of electronic theory.

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Flying Officer ..	39/3	49/3
Flight Lieutenant ..	45/9	55/9
Squadron Leader ..	56/3	66/3
Wing Commander ..	71/3	81/3
Group Captain ..	86/9	96/9

APPLICANTS with former commissioned service in His Majesty's Forces will be considered for appointment in his former rank or such rank as may be commensurate with his qualifications and experience. Other candidates will normally be offered the rank of Pilot Officer but higher rank may be determined depending upon qualifications, age, and other attributes. Officers are required to contribute to a pension scheme which provides a generous retiring allowance and covers invalidity or death during service.

For further information write to:—

THE SECRETARY, AIR BOARD, VICTORIA BARRACKS, MELBOURNE, S.C.I.

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FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: G. GLOVER (VK3AG); Federal Secretary: G. M. HULL (VK3ZS); Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK3JU.
Secretary: David H. Duff (VK2EO), Box 1734 G.P.O., Sydney.
Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor: Don B. Knock, VK2NO, 43 Yankoo Avenue, Waverley, Sydney.
Zone Correspondents: Northern Coast and Tablelands: VK2AHH; Ryan Ave. West Kempsey: Newcastle: Ron McD. Stuart, VK2ASJ, 88 Dunbar St., Stockton; Caulfields and Eastern Highlands: VK2VJ, 27 Comfort Ave., Cessnock; Western: W. H. St. VK2WH, Cambooya, Forbes; South Coast and Southern: Roy Raynor VK2DO, 4 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 43 Yankoo Ave., Waverley; Northern Suburbs: Harry Powell, VK2AVT, Russell Ave., Wahroonga; St. George: Ch. Coyne, VK2YX, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. S. C. Semmens, VK3GS.
Assistant Secretary: C. Gibson (VK3FO).

FEDERAL

MEETING WITH CIVIL DEFENCE MINISTER

On the 16th November, 1951, members of Federal Executive were granted an interview with the Minister for Civil Defence, the Hon. W. S. Kent-Hughes, to discuss with him the aims of civil defence in relation to communications and the part the Amateurs could play.

Mr. Perc Evans, by whose offices the interview was arranged, acquainted Mr. Kent-Hughes with the details of the general organisation of the I.A.R.U. and the nucleus of an excellent communication system available from the transmitting Amateurs of the Commonwealth.

Mr. Kent-Hughes gave a brief but enlightening reply to the questions put for authorisation to form a skeleton civil defence system, which he hoped to put through in January, 1952, and stressed of his opinion of including the Amateurs in the scheme.

Apart from the necessity for communications in the major cities and metropolitan areas, Mr. Kent-Hughes attached great importance to the Amateur flood and bush fire networks in the country areas and considered them a major consideration in any civil defence system. He maintained that food and food supplies was the most important matter in times of emergency; that the light match, the vest, the vest, deliberately thrown into dry grass or scrub in the country areas at the right time could wreck more havoc on the population than an air-raid on a city.

Mr. Kent-Hughes evinced keen interest in the information given to him regarding the Amateur networks at present in existence and personally requested that he be given full details of these because he considered that ultimately any civil defence system would utilise them to full advantage.

In conclusion he thanked the members of F.E. for the early interest displayed by the Wireless Institute of Australia in offering the service of its Amateurs, and the keen appreciation of the seriousness of the international situation and the necessity for civil defence communications to hold a state of emergency exist in this country.

NATIONAL FIELD DAY CONTEST

In view of the lack of interest in the National Field Day Contest over the last two or three years, notice was sent to all Divisions requesting the opinions of members as to whether the contest should be continued or not. All Divisions agreed to its continuance and a slightly revised set of rules were forwarded to the Divisions by the Federal Contest Committee and are published elsewhere in this issue.

With an eye to the future needs of civil defence communications, it is hoped that members will take a keener interest in this contest and delegate some of their equipment to the construction of light and compact portable stations. Lots of fun to be had in a field day contest, so what are you going to do "if" you're bored!

OTHER COUNTRIES' BANDS AND POWERS

A request to the I.A.R.U. for a list of frequencies, types of emission and power inputs allowed in Amateur countries, brought an administrative authorities, brought an air mail

Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at Radio School 35, Technical College.
Zone Correspondents: Western: C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rourke, VK3AKR, Killgrew, Westmore; North Eastern: T. K. Tennant, VK3JG, 36 Wilson Ave., Tatura; Far North West: M. Poole, VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. G. Kelly, VK3AKH, Timbarra; North Western: C. Case, VK3ACE, Cumming Ave., Birchp.

QUEENSLAND

President: J. H. Farrell, VK4WJ.
Secretary: J. F. Pickles, VK4FP, Box 633, G.P.O., Brisbane.
Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kurun Street, Chermide, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barber, VK5MD.
Secretary: G. M. Bowen, VK5XD, Box 1234K, G.P.O., Adelaide.

SILENT KEY

It is with deep regret that we record the passing of—

VK2WK—Rev. W. Kennedy.

letter of thanks for the suggestion and advice that this would be included in the June issue of the I.A.R.U. Calendar. For the interest and information of all members details will be published in a future issue of Amateur Radio.

SLOW MORSE TRANSMISSIONS

The following transmissions from the official W.I.A. stations are given on 1,500 Kc. on the days and times shown below—

Sunday—VK3WJ, 2030 to 2100 hours E.A.S.T. Monday—VK2VL, 2000 to 2030 hours E.A.S.T. Tuesday—VK3WJ, 1930 to 2000 hours E.A.S.T. Wednesday—VK5WJ, not operating at present. Thursday—VK5WJ, 1930 to 2000 hours E.A.S.T. Friday—VK3WJ, 2030 to 2100 hours E.A.S.T.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Jack Deane, VK5WL, ex-VK3WL, drops a word that he recently joined the ranks of the grandpops. States he gave hamming away after the first day of the last W contest and cancelled his licence end of August. He'll be back, sometime, if I know him.

SMSAQW, who renders sterling assistance at the Swedish QSL Bureau, mentioned that of over 150 VK stations in the QSL list, Australia has received only 20 cards in return. Hop on to it fellows, never let it be said, etc.

Eavesdropping on ZK2AA, of Nieu, recently returned from a trip to U.S.A., heard the following: "Yes, but a very wonderful trip." Brought back a Collins 320B exciter and an R.M.E. converter and lot of other gear. . . Running pair 24Gs in final at 1,000 volts. Only been back one week, haven't re-built my modulator yet or beam, so will be QRL for a while. Only return here for two years this time so you will see me back in ZL, one of

W.I.A. ACTIVITIES CALENDAR

- Jan. 6: Conclusion of Ross A. Hull Memorial V.H.F. Contest.
- Jan. 19-20: N.Z.A.R.T. Field Day for 1952.
- Jan. 26-27: W.I.A. National Field Day Contest.
- Jan. 31: Membership roll of each Division due with F.E.
- Feb. 15: Convention minutes from Divisions due to F.E.
- Feb. 28: Convention per capita due with F.E., end of fiscal year of Divisions.

Meeting Night: Second Tuesday of each month at 17 Weymouth St., Adelaide.
Divisional Sub-Editor: W. W. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK3WV.
Secretary: H. B. Lang, Box N102, G.P.O., Perth, W.A.
Meeting Place: Perth Technical College Annex at Bath Road, Perth.
Meeting Night: Third Monday of each month.
Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK10M.
Secretary: L. W. Edwards, VK1LE, Box 371B, G.P.O., Hobart.
Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.
Divisional Sub-Editor: S. Excell, VK7SJ, 77 Mole St., Hobart, Tasmania.
Zone Correspondent: Northern: C. A. Cullinan, VK1TX, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menai St., Burnie, Tasmania.

these days. Travelled 6,000 miles by planes, cars, etc., when in W. Hospitality was wonderful, had to return here for a rest, hi!

Some scores of cards returned by the Rounmanian QSL Bureau. YR3J was a phoney.

In forwarding his QSL, John Gore, ex-VK3J, of Heathcote, now back in England, mentions that printing has held up his QSLing but that all cards for his VK1 activities have now gone forward. He desires publicity for this fact. Anyone who dipped out, please come again.

Copied from ZLIST: "VR3GA returned to ZL early in November and is now living in Auckland, but his ZL call sign has not yet been allocated. In an amusing address at a Branch Meeting of VR3GA, he mentioned the general of the W. KHF, and VE gang. ZM36A is scheduled to return to ZL in early December."

George Grob, G6, one of the best known of the G gang, has left for Canada where he will reside for at least one year. George is retaining his G call sign and merely his licence end of August. As mentioned, he is absent. Although he will qualify for a VE licence, he does not expect to establish a station in VE but hopes to be heard frequently from the rigs of his Montreal friends VE2WA, VE2KZ and VE2HV. We will miss you from the bands and G gang and wish you a healthy and happy sojourn in Canada.

VK2AHA advises that M/Sgt. Wenglar, of TAJAFA and TAJFAS, is now back in U.S.A. as active under W3SPI. An station who contacted the above mentioned W.I.A. stations and has not received a card should write to W3SPI, M/Sgt. Wenglar, 1909 A.A.C.S. Squadron, Andrews A.F., Waco, D.C., U.S.A., where that want will be supplied.

An SX68 receiver has been sent on by FK8AC to the Baudouin Club, Belgium. Maybe this will stimulate Andre's interest sufficiently to entice him on to the Amateur bands, all other inducements have failed so far.

NEW SOUTH WALES

The November meeting of the N.S.W. Division was held at Science House on Friday 23rd at 7.30. The President, John Moyle, in the chair. A somewhat sparse attendance might be accounted for by the fact that the evening was a "bad" one for the evening. The meeting was outlined the organisation and requirements of the service and the benefits to be obtained by joining up. One thing which became clear from the discussion was that some of the members somewhat, was the very noticeable gap which is appearing between the Amateur and the Service, the emphasis is less and less on radio operators and more and more on radio technicians—this is the trend of the Service.

After the routine business had been attended to, Wing Commander Charles Smith, who was the meeting for some twenty-five minutes on the R.A.A.F. active reserve in the hope of interesting members in joining the Service. He outlined the organisation and requirements of the service and the benefits to be obtained by joining up. One thing which became clear from the discussion was that some of the members somewhat, was the very noticeable gap which is appearing between the Amateur and the Service, the emphasis is less and less on radio operators and more and more on radio technicians—this is the trend of the Service. (Continued on Page 15, Column 3)

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(Continued from Page 13)

Calamity for the month fell to the lot of 2DX, of Macksville. Ted was dismantling his three element beam for 20 preparatory of taking up

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NORTH EASTERN ZONE

EASTERN ZONE

After doing a little brass pounding on 20 mx, I wonder why so many T9 reports are given to DX stations whose real notes are anything from T1 to "B awful!" Mine is, of course, T9X: (SARV please note!) 3TH is busy with the harvest. 3DL, 3VL and 3US active on 6 mx. BB and SAG are busy these days and SAGF is active on 40, fighting battles with the locals. SALA spends his spare time at fire brigade drill, and the modulator is still unfinished.

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Looking back, the past is rich in memories for many of us. Memories of other days and of friends, some of them now passed on, who have helped and inspired us. Memories of the old-time Radio. Memories of those who laid the foundation stone and who laboured with untiring effort to build onward and upward. Memories of those who have achieved the present eminence we now enjoy. Chiselled in the cornerstone of this structure is the name of the W.I.A., a name which has become a household word in Australia, and for that matter throughout the world as typifying and representative of the highest and best in achievement and in its accomplishments. Yes my friends, we have built a structure of which we are justly proud, and I regret that I cannot personally thank you for your part in building, and realise that I owe a lot to those who have cheerfully done my share in addition to their own. Perhaps I can make up for this by saying that I shall be glad to see you come, because there is still a lot to be done in such a big structure as ours, and I don't know a better time to get in with you than now. I shall be glad to have you come along with me, fellow Ham, so what about it?

WESTERN AUSTRALIA

Well chaps, by the time you read this we'll have had Xmas and New Year (and when I say "had it" I mean just that), but at the time of writing it's still November. So I'll have to cast my mind in two directions—backwards to report what's happened, and forwards to try to forecast what will happen.

Early in November a representative group of W.I.A., I.R.E. University, Technical College and radio amateurs typeset and printed a copy of the film "Destination Known," and by all accounts it was well worth seeing, and a smile to myself over George's self-references to the "little film." I had a small number of points the mentally queried and his wife's summing-up of his outlook. Take a woman to see a film about inter-planetary travel and she'll ask you to explain the whole thing or else sit on the edge of her seat awaiting the shots where they show the interesting bits of the film. I'll tell you that I will and he'll watch for technical slip-ups and talk about 'em from the time they step outside the theatre till his wife, in self-defence, snores off. It did appear though to have taken the producers a lot of time and trouble to ensure a higher-than-usual standard of production and I did not think it likely that more investment would be made in the future.

The R.D. Contest results were announced by George over the Sunday morning broadcast and, while a disappointment to us, are justifications for cheers in the VK7 Division and congratulations for the boys. The "Apple Isle" are to be commended for their enthusiasm for this event and their, other than 50% return of logs. Our effort of only 35 logs looks a bit sick alongside that of the men you remember as a slightly larger number than the VK7s. Contests as a bore, more to me, but I do enter for the R.D. and I feel there are many others who feel the same way for it's a contest different to all others and it's a really good way to make a log. Make a resolution now, chaps. Next year VK7's will have a bumper entry of logs and we'll

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give VK7 a bit of hurry up! We could win the R.D. just as they have—i.e., by getting the major proportion of financial members sending in logs. As for changing the rules—No! (The opinions expressed here are those of the author and not necessarily those of the Division—sounds like election time on the broadcast band doesn't it?)

The Number member included 8AG's demonstration of the Flying Doctor reply to the Marconi auto-alarm. Instead of sending a message to the base, the doctor, within seconds, the outback resident who wants contact with a base station outside actual sked times switches on the rig, blows softly into a microphone and the doctor's reply comes on amplifier at base does the rest. Relays turn on lights, ring bells and (although Wally didn't say so), probably rev up the doctor's face, flash a light and blow a siren in the local—or pool-room! At the same meeting 8JW's logging and filing system, described by 8JW who obviously is a thorough and conscientious person, was in everything he does. I must copy this system. It will be handy for me to know the Christian's progress in the world. I have heard of this—regularly! Our President 8JW does it. How he has extended the usefulness of a Class C Wavemeter by including such features as a frequency counter, a diode monitor and a carrier-shift indicator.

Conditions Dept.-28 Mc. still seems to be in the doldrums most of the time, although EMO gave in the last few days. All day, Allan confessed to having an extra QSO by the end of one November morning when the band was open. 14 Mc seems to yield most for the boys, but the QSOs are not as plentiful as in the country-city QSOs provided you can find a spot to park. Relative to this I'm opening a lot of space for the 1000's and 100's of the 100kw+ fix in the N.T. each with rhombos aimed and operating from 7070 to 7200 Kc. These will be turned on each night and left open for 24 hours. Within 10 minutes I can guarantee the 40 metre band would be fit for gentlemen to inhabit once again. Offers of \$1000.00 to 1500.00 for a 100kw+ station are being addressed to me and the goods sent freight paid. If the powers-that-be can't (or won't) do anything for us, we'll have to do something ourselves. The Bureau is not doing much. The contacts in a very patchy manner, sometimes closing up at 7 p.m. and on other nights remaining open. The 1000's and 100's are really good. (Cue) was in QSO with 6FB (Perth) till ten minutes to midnight when the band suddenly opened up. The 1000's and 100's are by a star-wart, notably 8LG, 8TL, 8MO and 8G.

Seandal Dept.—Not a great deal this month. I would refer all VKs readers to the trenchant remarks by Uncle Warwick in an adjoining column in November "A.R." and to the excellent services rendered by the Mails Branch of the G.P.O. Don't hide your light under a bushel for a "two-over-two"—come out and mix with the "old women" on 7 Mc. or else mix up the hell point and drop me a line; the address is Box 127, Geraldton. I'm not a thought-reader!

6CN should have made an appearance with his beautiful new rig with professional looks inside and out (and all home-made too) by the time you read this. 6RS gave the rockets and black-devil scared the night out of the town. Early on Guy went to the night club he heard European music between 2230 and 2300 W.A. time. Band summer brought a water-shortage to Cue through a breakdown of the local pumping engine. Len's OK though; he has a stand-by pump and a good cook at the house. The town was also in the news through the activities of a man who pointed a gun at himself and it went off—with fatal results. Rumours that he was a victim of b.c.l. were spread and are unfounded and are hotly denied by ART!

6EL catching up on the DX with the new 813 rig which runs 60 watts to a 300 ohm fed multi-band window.

STOP PRESS! Congratulations are extended from the VK6 gang to Mr. and Mrs. VK6WM, of Kalgoorlie, upon the arrival of a daughter born on 24th November, 1961.

TASMANIA

Welcome visitors at the November Council meeting were Len Crook and the Northern Secretary, Sir Arnold, and a little time after their long drive from the northern capital. Plans were formulated for a 144 Mc. relay from Hobart to the north west coast and eventually, a VK3 hook-up. It seems activity will soon be restored on 144 Mc. bands as it is anticipated field days will begin in January. The weather should be quite good, particularly on this band. Special attention is to be given to the kiddies at all future field days; believe arrangements are being made to

conduct races, treasure hunts, etc. with some good prizes attached. As a lot of effort and time is being spent in the preparation of the field day it is hoped all members will participate even if no gear is available; still come along and enjoy yourselves.

Owing to these notes being prepared prior to the December meeting, no report can be given on the sale of radio equipment which is to be auctioned by TOM at this meeting. Keen bidding has taken place in the past with several humorous incidents and we trust this disposal of equipment is a readily received one. The next lecture is to be given by Mr. Joe Brown and the subject is entitled "There's nothing new under the sun" and knowing Joe, it should be interesting.

Amateur activity on all bands has been retarded somewhat owing to the poor conditions, but a few of the ardent Hams can be still heard working crossband on 7 Mc. DX is becoming scarce although on 40 the QRM from commercials would make it impossible to copy very much.

A 100 watt Tx is being planned by TSD, although swotting for one of the commercial tickets may retard progress quite a deal. Parallel 807s is the final decided on and when completed should be f.b. A new 60 watt modulator is soon to be in operation at TAG. The station is looking quite a lot better than the future. Difficulty in hearing the Institute's Sunday morning broadcast has been experienced from this area, 80 mx is the only band which is workable at all if Hobart signals are required.

From 7AF it is learnt the tape recorder under construction should be completed by the time these notes appear. No doubt on completion Bob will be good enough to give us a lecture on the pitfalls which one can encounter in the preparation of this type of equipment. In the north it seems TCA is again active after a considerable lapse of time. An 802 is the final amplifier and Max's f.b. modulation is a pleasure to listen too. TSA active on 20 and 40 and it seems the long wire being used works out OK, from reports received.

Our hard working Secretary, Len Edwards, is spending a few weeks touring the State and we trust an enjoyable time was had. Len is engaged in furthering the new enterprise recently. Len has not been active of late, but we hope he will be back in the office in business sense, we hope to hear more from this QTH. Incidentally Len, I read in the local newspaper about the great fishing expedition. I was surprised to hear that you were not surprised to see TSD working during the week, how's the feet standing up to it don't they TKX busily turning up his feet. I hope you are busy with the summer motor launch racing, how about coming on some time don't you? It's ages since we have heard you. TGA active on 20.000, ZL and ZL and uses great modulation with success.

NORTH WESTERN ZONE

There seems to be a number of new rigs being built here lately. TWA is putting a lot of time into a rack and panel job with a broad band switching exciter and silver plated coils in the final tank; it looks quite professional. Ellis and it won't be long before you are pushing out the "ergs." We don't hear TDM very often, what about coming on the air one night Eric? Just to show us that your rig still works. TKB was heard working some very good DX the other day on 10 metres, one of the stations being a KLT; good work Ian.

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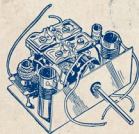
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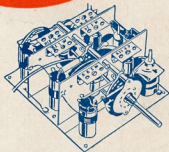
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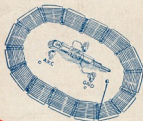
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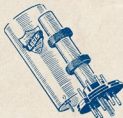
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